UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

JUN 16 2006

Ms. Ginger Mullins, Chief
Regulatory Branch
U.S. Army Corps of Engineers, Huntington District
502 Eighth Street
Huntington, WV 25701-20701

Re: Spruce No. 1 Mine Proposal Draft Environmental Impact Statement and Application for Clean Water Act Section 404 Individual Permit and NPDES Permit; Logan County, West Virginia. CEQ # 20060105

Dear Ms. Mullins:

In accordance with the Section 102(C) of National Environmental Policy Act (NEPA), and Section 309 of the Clean Air Act (CAA), the U.S. Environmental Protection Agency, Region III (EPA) has completed its review of the subject Draft Environmental Impact Statement (Draft EIS) and submits these formal comments based on that review. The Draft EIS is an evaluation of alternatives and environmental impacts associated with a mountaintop removal and valley fills mining proposal by the Mingo Logan Coal Mining Company in the Spruce Fork watershed in Logan County, West Virginia. We understand that this Draft EIS is also intended to serve as the applicant's principal data and information document for the Individual Permit application to discharge fill into waters of the United States under Section 404 of the Clean Water Act.

Within the framework of the national need for energy and the historic and ongoing environmental risk associated with mountaintop mining, EPA reviewed the current proposal by the Mingo Logan Coal Company to establish a new mine at the Spruce No.1 site. We first reviewed this proposal and a previous Draft Environmental Impact Statement in 2002. At that time we believed that even with the best practices, mountaintop mining yields significant and unavoidable environmental impacts that had not been adequately described in the document. If unchecked, the site by site impacts of mountaintop mines could also cumulatively result in watershed-wide ecosystem degradation.

We are now faced with a new Environmental Impact Statement and a significantly modified project. The new Spruce No.1 proposal still reflects unavoidable impacts. However, due to the diligent and earnest efforts of the applicant and its representatives, progressive

engineering, and a commitment by Mingo Logan Coal to minimize the footprint of the proposal, its impacts have been significantly reduced.

Project Description and Site Specific Impacts

Mingo Logan Coal Company proposes to construct, operate, and reclaim the Spruce No. 1 Coal Mine. Construction is projected to begin in 2006, with mining commencing by 2007 and continuing for a period of fifteen years. The proposed project would include mining of an average of 2.73 million tons of bituminous coal annually via mountaintop mining methods with incidental contour, auger, and/or highwall/thin-seam mining. The preferred alternative would result in a total surface disturbance of 2,278 acres of land. Approximately 500 acres would be actively mined at any one time, based on sequential backfilling and concurrent reclamation of the mine areas. The mining process would remove 400 to 450 vertical feet or 501 million cubic yards of overburden material. Nearly 391 million cubic yards would be placed within the mined area and the remaining 110 million cubic yards placed in the 6 proposed valley fills. The proposed Spruce No. 1 Mine would result in the discharge of approximately 110 million cubic yards of dredged and fill material into waters of the U.S. over a period of 15 years. The preferred alternative would result in the following within the tributary watersheds of the Spruce Fork: construction of six valley fills, associated sediment ponds, and erosion protection zones; discharges of fill material into 10,630 feet (2.01 miles) of ephemeral streams, 32,491 feet (6.15 miles) of intermittent streams, 825 feet (0.16 miles) of perennial streams, and 0.12 acres of emergent wetland; and the loss of 2,183 acres of forests, 50 acres of woodland riparian habitat and 45 acres of reclaimed land.

The quality of the information presented to assess the proposed project's impacts has improved since publication of the 2002 Draft EIS regarding this proposed project. More importantly, the applicant has made many improvements to this project that will result in reduced on site impacts compared to previously submitted alternatives. These reductions will be achieved by extracting less coal and using smaller equipment for the operations. The overall footprint of the mining operation has been reduced from 3,113 acres to 2,278 acres. Twelve miles of stream impacts were reduced to eight miles of impacts. The White Oak Branch, a high quality stream that was to be significantly impacted, has been avoided. In addition the applicant proposes to reforest the project area and mitigate for the loss of Waters of the U. S. The site specific impacts of this proposal remain a concern but we commend the applicant for their efforts to minimize impacts.

Cumulative Impacts

We hope to continue to work with Mingo Logan Coal Company and state and federal regulatory agencies to address the cumulative impacts that result from mountaintop mining activities in the Little Coal watershed. We have concerns based on data collected from areas that were previously mined and included in the recent interagency Mountaintop Mining/Valley Fills in Appalachia Final Programmatic Environmental Impact Statement (Final PEIS) (EPA 9-03-R-05002, 2005). We are encouraged by our recent discussions with the applicant regarding our

concerns. We hope that a progressive watershed approach to mitigate these impacts can be developed. However, a compensatory mitigation plan that fully mitigates all adverse impacts of the proposal, including cumulative impacts, should be completed as a part of the Clean Water Act review and permit process for this mining operation.

The Final PEIS estimated that between 1992 and 2002, across the Appalachian mountaintop mining region, 1200 miles of headwater streams have been directly impacted by mountaintop mining/valley fill activities, including coal removal areas, valley fills, roads and ponds. Similar losses are projected to occur over the next ten years. Of the largely forested mountaintop mining study area, the Final PEIS estimated that approximately 761,094 acres have been or may be affected by recent and future (1992-2012) mountaintop mining. To date, these impacts have not been successfully mitigated, resulting in the impairment of significant natural resources at the watershed level.

Environmental Justice

We suggest that additional analysis of the potential for disproportionately high and adverse effects on low-income populations be included in the Final EIS. The Draft EIS indicates that the percentage of low-income populations in the affected county is greater than the State-level percentage. We recommend that a more detailed analysis be conducted to better understand how these low-income populations may be affected by the proposed project and to provide a basis for a comparison of the impacts on these low-income populations with impacts on other populations. Please refer to the detailed comments for a further discussion of the Environmental Justice concerns.

Conclusions and Recommendations

We recognize that despite government and industries' best efforts, mountaintop mining will continue to have impacts on the environment. We have remaining environmental concerns based on the uncertainty of the mitigation proposals and an as yet incomplete cumulative impact assessment and management plan for the Little Coal River watershed. Based on our review, we rate this DEIS as "EC-2" (Environmental Concerns and Insufficient Information)**.** We would like to work with the Huntington District, other Federal and State agencies, and representatives of the mining industry to address these concerns as the final EIS is developed and subsequent decisions regarding the permit are made. Specifically we recommend the following:

- EPA will work with the Corps, Federal and State agencies and the applicant in the context of the CWA permit process to address remaining concerns with the proposed mitigation as identified in our detailed comments, including monitoring the performance of mitigation activities at agreed upon milestones of project development.
- EPA will work with the Corps, Federal and State agencies, the applicant, public, and other stakeholders on an agreement to develop a Little Coal River watershed cumulative impact assessment and restoration plan as discussed in the detailed comments. We recommend that the FEIS recognize the need for such an agreement and the subsequent

development of a cumulative impact assessment and restoration plan to evaluate and make recommendations for addressing cumulative impacts within the Little Coal River watershed. EPA recommends that the cumulative impact assessment and restoration plan should be completed prior to consideration of additional surface coal mining operations within the Little Coal watershed.

In summary, EPA is encouraged with the progress made to date by Mingo Logan Coal Company in working with the responsible agencies to balance the important need for energy while protecting communities and natural resources for future generations. I encourage additional discussions in an effort to clarify and resolve the issues raised in this letter as you finalize the EIS and consider a Record of Decision. Our detailed comments and a copy of our EIS rating criteria are enclosed for your reference. If you have any questions or comments, please contact John R. Pomponio, Director, Environmental Assessment and Innovation Division, at (215) 814-2702.

Sincerely,

Donald S. Welsh

Donald S. Welsh
Regional Administrator

Attachments

cc: Mr. Michael Robinson, U.S. Office of Surface Mining, Pittsburgh, PA
Mr. David Densmore, U.S. Fish and Wildlife Service, State College, PA
Secretary Stephanie R. Timmermeyer, W.V. Department of Environmental Protection, Charleston, WV

Detailed Comments - Spruce No. 1 Mine, Construction and Operation, Mining for 2.73 Million Ton of Bituminous Coal, NPDES Permit and US Army COE Section 404 Permit, Logan County, CEQ # 20060105

Watershed Stewardship Agreement

As discussed in the cover letter, we recommend development of a Watershed Stewardship Agreement that would outline the preparation of a cumulative impact assessment and restoration plan for the Little Coal River watershed. The restoration plan should include a means to address spatial and temporal plans for mining, as well as specific mitigation and restoration proposals to assure the watershed's continued functionality, resiliency, and diversity. We also recommend that the restoration plan consider the use of an environmental management systems approach that would allow for management and monitoring of the restoration efforts by a coordinating committee, including specific concurrence points for the coordinating committee. We look forward to working with the Corps and others on the specifics of the Watershed Stewardship Agreement, cumulative impact assessment, and restoration plan.

Mitigation

The DEIS includes a compensatory mitigation plan to offset anticipated adverse environmental impacts from this mining operation. The streams were assessed with a method that does not identify the functions that will be lost by mining activities and inappropriately applies a constant based on stream type. The Huntington District Corps of Engineers (Corps) is currently developing a stream protocol in an attempt to provide a standard, repeatable, and scientifically sound basis for assessing the ecological value of Appalachian headwater streams. The protocol is being designed to help in the evaluation of potential impacts to streams from proposed mining operations and to provide a more consistent basis for calculating the nature and extent of mitigation that is appropriate for offsetting such impacts. EPA supports the development of a consistent stream protocol for use in West Virginia. Hopefully this protocol will be developed in a time frame that may provide additional detail to the current mitigation plan. Regardless, EPA recommends that, in the context of the Clean Water Act review and permitting of the project, additional improvements are necessary to ensure the mitigation plan effectively compensates for anticipated adverse environmental impacts. We offer our assistance to work with you and the project applicant in developing such a plan.

The DEIS documents the high quality of the project areas streams and the diverse, sensitive benthic species found in them. Based on the information provided in the mitigation plan, the current practice and the many studies evaluated in the development of the DPEIS on Mountaintop Mining/Valley Fills (EPA 9-03-R-00013) we have concerns as to whether the on-site ditches will be functioning as ephemeral and intermittent streams. We are also concerned about whether these sediment control ditches can provide suitable stream mitigation opportunities. Further details are necessary to confirm that the construction of permanent

flowing stream channels on the down-dip side of the basal seam(s), or other designs that would provide a consistent source of water for the stream to function throughout the year. For comparison, EPA in the DPEIS sampled a sediment control structure in the Mud River. This structure had WVSCI scores of 21.6, 22.2, 16.2, and 24.4 indicating severe biological impairment. Clearly this sediment ditch has neither the "structure" nor "function" of a headwater stream and would provide doubtful mitigation opportunities. We recommend that examples of successful reclaimed ditches that demonstrate replacement of biological function should be provided in the FEIS.

We are concerned about the validity of the assumption that the discharge from valley fills in Pigeonroost Branch will consist of perennial flow and that mitigation credit for restoration of temporary impacts to that segment should receive a multiplier of 2 because the flow may be perennial. The temporal periodicity of seasonal flows is important to the ecology and life-cycle of many amphibians. Consequently, providing perennial flow where intermittent flow is the natural habitat should not be considered to be a necessarily positive improvement, particularly when the increased flow may have degraded water quality. The environmental loss of filling the main forks of Pigeonroost Branch, which enrich the lower stretches of the stream, may be more damaging than the small gain of the increased flow, particularly if the increased flow has degraded water quality. In addition, it does not appear that the reclaimed sediment ditches connect with Pigeonroost to replace this lost function. Since there was no functional assessment conducted for the streams in the project area, it is unclear how it will be confirmed that these modified sediment ditches will replace lost functions of impacted streams.

We recommend that the mitigation/restoration/reclamation plans should also address food sources and habitat needs for species of concern and other wildlife. The applicant should coordinate closely with USFWS and other stakeholders. We recommend that all stream and wetland mitigation sites be protected by perpetual deed restrictions.

Water Quality

The Aquatic Impacts Statistical Report of the DPEIS indicated that ecological characteristics of productivity and habitat are easily disrupted in headwater streams [Appendix D; USEPA, 2003)]. Based on numerous studies and information obtained for the DPEIS for Mountain Top Mining/Valley Fill (MTM/VF), there is a strong correlation between stream condition and water quality. Benthic condition and stressors were associated with water quality parameters, most of which do not appear in the NPDES permit (conductivity, alkalinity, TDS, sulfate, hardness, etc.). (Fulk et al report documents these findings. Attachment 1). This information should be clearly documented in the DEIS.

The existing data from Spruce Fork that indicates MTM/VF activities have degraded streams to the point where they are considered impaired using the West Virginia Stream Condition Index (WVSCI). Considering that water leaving the mined and filled areas in Spruce Fork is degraded, additional caution is necessary in future permitting and mitigation

requirements. The Final EIS should consider the strong and statistically significant relationships found between biological condition and these water quality parameters as summarized in Table 1 and supporting data. (see Attachment 2)

Selenium concentrations continue to be a concern in waters downstream of mining activities because selenium is bioaccumulative and toxic to fish and wildlife above certain levels. The DPEIS documented increased selenium concentrations in waters downstream of certain valley fills. Recognizing these concerns, we believe that the Corps, and other Federal and State partners, consistent with CWA and SMCRA authorities, should be coordinating to assess potential water quality issues associated with selenium downstream of mining activities to ensure effective protection of human health and the environment. We understand that as a result of the elevated selenium levels currently observed at various areas, WVDEP is developing specific permit conditions to assess and control selenium introduction that could potentially occur as a result of this project. In addition to identifying project-specific selenium reduction measures, we also recommend looking at this issue more comprehensively and developing interagency solutions which address this issue.

Minimizing Impacts

The four in-series sediment ponds located as in-stream waste treatment devices require special attention. We recommend that the applicant specifically reinforce their commitment to removal of the ponds and complete restoration of the approximately one mile of stream including the EPZ. In addition, the mitigation on the streams with the ponds should be conducted immediately upon removal of the ponds and not delayed until bond release.

Further rationale should be provided concerning the location of the office complex that requires the permanent filling of 1,289 feet of stream in this location. This permanent complex and associated access road could compromise the restoration of Pigeonroost Branch. We recommend other options be considered for its placement.

Monitoring

The DEIS lacks a detailed description of how the restoration and mitigation will be monitored. Due to the impacts from mining and the history with reclamation and stream mitigation, we recommend that monitoring of the mitigation sites be conducted for a minimum of 10 years after completion of mining activities to insure that the mitigation is a success. We recommend that the applicant work with the State and federal agencies to develop an improved monitoring plan.

Geology

We recommend that the discussion of regional geology should be updated in context of the past two decades' literature on tectonic settings in the Paleozoic. It would be useful to

provide more information on acid-base testing; e.g. type of sample, condition of sample (core, or fragmented), implications of results, limits of study. This information is necessary in order to understand the implications of the results. The section on Topographic changes as an Environmental Consequence should provide specific estimates for topographic loss, which can be gleaned from earlier text. A discussion of impacts of topographic change should include habitat, microclimate, effects of change on species, species that can be expected to be restored, what is less likely to be restored and the expected time for forest maturity. The information can be included in this section or discussion in other sections can be referenced.

Environmental Justice

We suggest that additional analysis of the potential for disproportionately high and adverse effects on low-income populations be included in the Final EIS. The DEIS indicates that the percentage of low-income populations in the affected county is greater than the State-level percentage, and as such, we recommend that a more detailed analysis be conducted to better understand how these low-income populations may be affected by the proposed project and to provide a basis for a comparison of the impacts on these low-income populations with other impacts on other populations.

The DEIS indicates that the unemployment rate is high, but does not explain the reason for this high rate. It also does not provide evidence that the project will have a positive impact upon the low-income residents.

Documentation and other support for the following statement should be provided, "The community impacts would affect all households in the same way and would not have a greater or more adverse effect on minority or low-income households."

The DEIS describes a blasting zone, but it is unclear whether residents near the zone will face greater effects than those living elsewhere, and if so, whether disproportionate numbers of low income residents live in areas facing such effects. Thus, we recommend that a characterization of the economic status of residents near the site and the conditions that they face including any effects from proximity to the blasting zone, should be included in the FEIS. This may require that the FEIS describe whether there will be blasting, truck traffic, noise, and fugitive dusts ranging over the entire area or whether those activities and impacts will be concentrated in particular areas. In addition, an analysis of the cumulative effects of the work activities on the residents closest to the bulk of the work should be included in the FEIS, as well as a description of any appropriate mitigation measures. Detailed maps outlining the residential areas in relation to these activities may help.

Finally, we recommend that the FEIS document what specific outreach efforts were made to ensure effective community participation of low-income populations in the NEPA analysis.

Attachment 1

Fulk, Florence et al. “Ecological Assessment of Streams in the Coal Mining Region of West Virginia Using Data Collected by the U.S. EPA and Environmental Consulting Firms”. U.S. EPA, National Exposure Research Laboratory. February 2003

Attachment 2

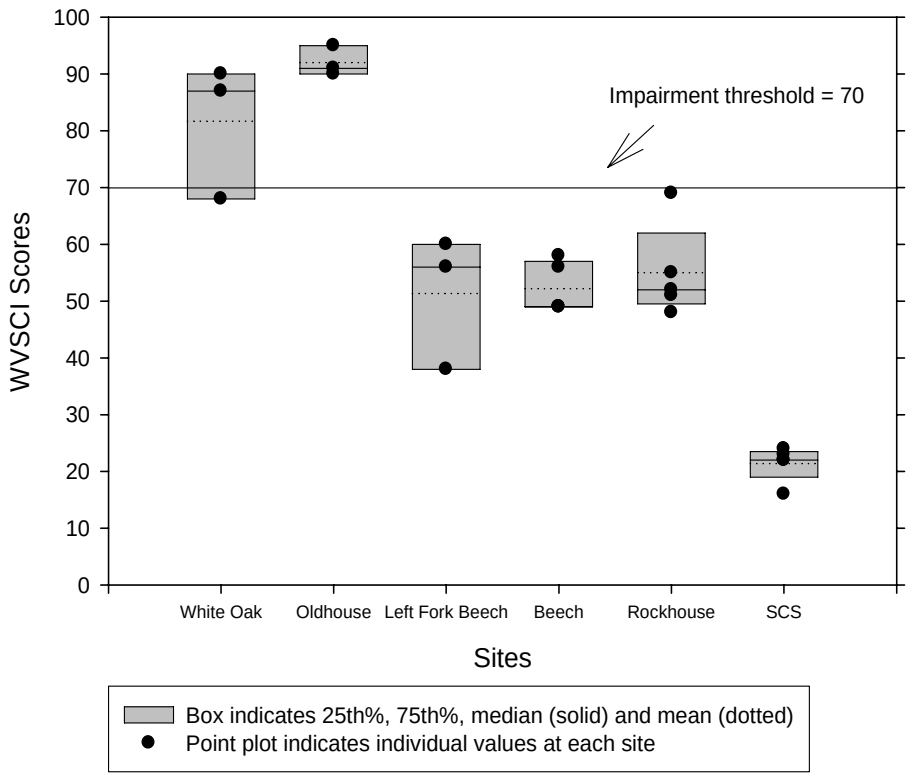
Table and supporting data from Aquatic Biology Team

Table 1. MTM/VF Coal Mining EIS Macroinvertebrate Data for Spruce Fork Watershed, for "Unmined" and "Filled" streams.

STREAM NAME	SITE #	EIS CLASS	WVSCI SPRING 99	WVSCI SUMMER 99	WVSCI FALL 99	WVSCI WINTER 00	WVSCI SPRING 00	AVG WVSCI	WVSCI CONDITION RATING	CONDUCT-IVITY (US/CM) SPRING 00
White Oak Branch	MT39	Unmined	87	Not sampled	Not sampled	68	90	82	Very Good	64
Oldhouse Branch	MT42	Unmined	95	Not sampled	Not sampled	91	90	92	Very Good	47
Left Fork Beech Creek	MT34B	Filled	56	60	Not sampled	Not sampled	38	51	Fair (Aquatic Life Use Impaired)	1210
Beech Creek	MT32	Filled	56	49	58	49	49	52	Fair (Aquatic Life Use Impaired)	454
Rockhouse Branch	MT25B	Filled	48	55	69	51	52	55	Fair (Aquatic Life Use Impaired)	575
Sediment Control Structure (Stanley Fork of Mud River)	MT24	Sediment Control Structure	23	22	22	16	24	21	Very Poor (Aquatic Life use Imaord.	1980

Streams were "not sampled" due to insufficient flow. The sediment control structure upstream of Stanley Fork on the Mud River is also shown for comparison purposes. This was the only sediment control structure we sampled for the EIS.

MTM/VF Coal Mining EIS Data - Spruce Fork Watershed



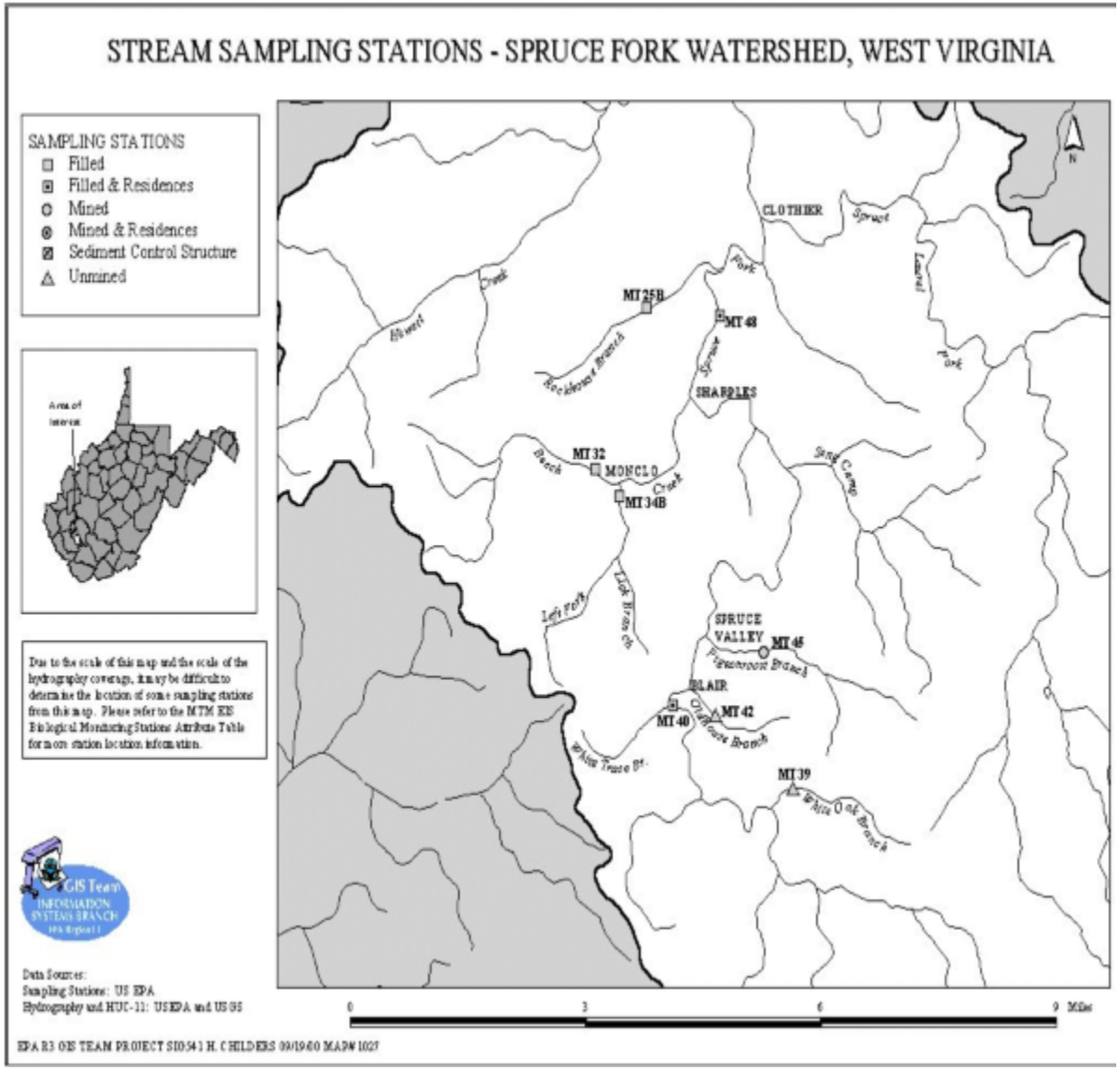


Figure 1. Stream Sampling Stations - Spruce Fork Watershed, West Virginia

Figure 8. Comparison of WV Stream Condition Index (SCI) Values Spring 1999

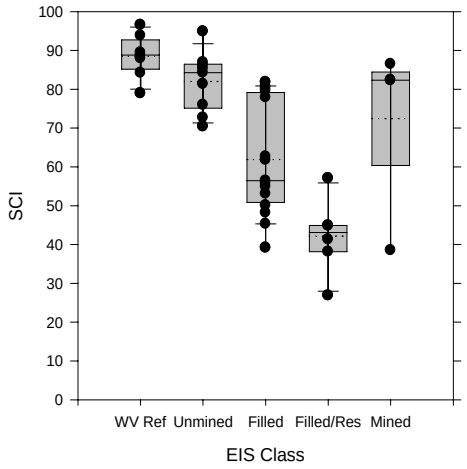


Figure 17. Comparison of WV Stream Condition Index Values Summer 1999

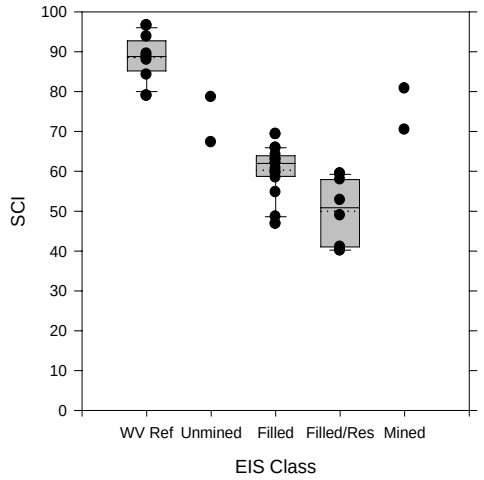


Figure 26. Comparison of WV Stream Condition Index Values Fall 1999

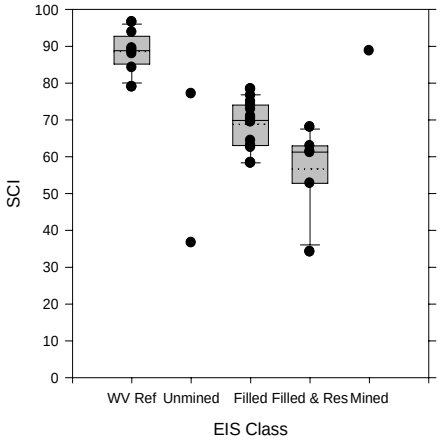


Figure 35. Comparison of WV Stream Condition Index (SCI) Values Winter 2000